

Transistor with Dopant-Bearing Metal in Source and Drain

ABSTRACT OF THE DISCLOSURE

A transistor and method of manufacturing thereof. A gate dielectric and gate are formed over a workpiece, and the source and drain regions of a transistor are recessed. The recesses are filled with a dopant-bearing metal, and a low-temperature anneal process is used to form doped regions within the workpiece adjacent the dopant-bearing metal regions. A transistor having a small effective oxide thickness and a well-controlled junction depth is formed.